

Sub
B,
1
5
10

1. (AMENDED) An apparatus comprising:

an input section configured to generate a first control signal and a second control signal in response to an input signal and a select signal; and

an output section configured to generate an output signal in response to said first and second control signals, wherein said output signal is (i) related to said input signal when in a first mode and (ii) disabled when in a second mode, wherein one or more devices each have a source and a drain configured to connect said first control signal and said second control signal when in said first mode.

2. The apparatus according to claim 1, wherein said apparatus comprises a push-pull multiplexer bit.

3. The apparatus according to claim 1, wherein an output load of said output signal is independent of an input load of said input signal.

4. The apparatus according to claim 3, wherein said output load is independent of said select signal.

5. The apparatus according to claim 1, wherein said first and second control signals are configured to eliminate output loading of said output signal from said input signal.

6. The apparatus according to claim 1, wherein coupling of non-selected inputs to said output signal is eliminated.

A² 7. (AMENDED) The apparatus according to claim 1, wherein said output signal comprises a complement of said input signal when in said first mode.

8. The apparatus according to claim 1, further comprising two or more of each of said input section or said output section, configured as a multiplexer or Programmable Interconnect Matrix.

A³ 9. (AMENDED) The apparatus according to claim 1, wherein said input section is further configured in response to a complement of said select signal.

10. The apparatus according to claim 1, wherein said first and second modes are controlled by said first and second control signals.

Sub
B4
11. (AMENDED) The apparatus according to claim 1,
wherein said input section comprises:

one or more second devices; and

one or more third devices coupled to said second devices
and configured to generate said first and second control signals.

12. (AMENDED) The apparatus according to claim 11,
wherein:

said one or more second devices are coupled to said input
signal and configured in response to said select signal; and

said one or more third devices are coupled to (i) said
select signal and (ii) a supply voltage or a ground voltage.

13. (AMENDED) The apparatus according to claim 12,
wherein said output section comprises:

one or more fourth devices; and

one or more fifth devices, wherein said fourth and fifth
devices are configured to present said output signal in response to
said first and second control signals.

14. The apparatus according to claim 11, wherein said
first mode comprises an enabled mode and said second mode comprises
a disabled mode.

15. (AMENDED) An apparatus comprising:

5
A5
means for generating a first control signal and a second control signal in response to an input signal and a select signal; and

5
B5
means for generating an output signal in response to said first and second control signals, wherein said output signal is (i) related to said input signal when in a first mode and (ii) disabled when in a second mode, wherein one or more devices each have a source and a drain configured to connect said first control signal and said second control signal when in said first mode.

16. (AMENDED) A method for tri-stating an output of a bit, comprising the steps of:

5
(A) generating a first state of said output by tracking an input when in a first mode;

(B) generating a second state of said output when in a second mode; and

10
(C) isolating said output from said input when in said second mode, wherein one or more devices each have a source and a drain configured to connect said first control signal and said second control signal when in said first mode.

17. (AMENDED) The method according to claim 16, wherein step (A) further comprises:

cont
25

turning on one or more second devices; and
turning off one or more third devices.

18. (AMENDED) The method according to claim 17, wherein
step (B) further comprises:

turning on one or more fourth devices; and
turning off one or more fifth devices.

19. The method according to claim 16, wherein said first
mode comprises an enabled mode and said second mode comprises a
disabled mode.

20. The method according to claim 16, wherein said bit
comprises a multiplexer bit.

Please add the following new claim:

21. (NEW) The apparatus according to claim 1, wherein
said output signal follows said input signal without a voltage
difference due to a threshold of a second one or more devices.